

TABLE I

COMPONENTS	FIRST PASTE	SECOND PASTE
Glycerol	26.0	33.0
Sorbitol (70% Aqueous)	27.9	—
Sodium Carboxymethyl Cellulose	—	0.8
Xanthan Gum	0.5	—
Silica Thickener	3.0	0.5
Sodium Benzoate	0.1	0.5
Sodium Saccharin	—	0.2
Zinc Lactate	2.0	—
Calcium Metaphosphate	30.0	17.5
Calcium Carbonate	—	2.5
Sodium Bicarbonate	—	20.0
Citric Acid	4.5	—
Flavor	—	1.0
Sodium Fluoride	0.24	0.24
Water	balance	balance

Equal amounts of the first and second pastes are added to respective chambers of a dual compartment dispenser such as shown in U.S. Pat. No. 5,038,963 (Pettingill et al.) and U.S. Pat. No. 5,020,694 (Pettingill). When a consumer is ready for use of this product, the consumer applies pressure to the dispenser thereby causing extrusion of strands of the first and second pastes which are deposited onto a toothbrush. Within one or two minutes, the consumer will apply the toothbrush with the combined first and second components to the teeth and gums brushing same.

## EXAMPLE 4

A clinical trial was conducted to compare the dental product of Example 1 with an identical product that did not include bicarbonate/zinc citrate combination.

## Methodology

## Subject Selection Criteria

Forty panelists, both female and male, between the ages of 18 and 65 were recruited to participate in this study. Panelists were chosen on the basis of having present the Mandibular four incisors and two cuspid teeth. Excluded from participation was anyone with a history of serious disease or persons who exhibited gross neglect of oral hygiene, rampant caries, advanced periodontitis or those in need of professional dental attention. Subjects who did not brush their teeth at least two times per day were also excluded.

## Study Examinations

## Phase One;

Full mouth gingival assessments were evaluated according to Lobene's Modified Gingival Index. Following assessment, each panelist received a thorough dental cleaning by a registered dental hygienist. Panelists were then given a regular toothpaste to use for the following three weeks thereby allowing each panelist to build gingival problems. After three weeks of regular toothpaste use, gingival evaluations were conducted to obtain a baseline for panelists' normal gingival condition.

Another dental prophylaxis was performed rendering the panelists ready to receive the first test product. The product of Example 1 was then used by panelists for the next three weeks. Gingival evaluations were conducted after the two and three week period of product usage.

## Phase Two;

Panelists were directed to use regular toothpaste for a four week washout period.

## Phase Three:

The teeth were then treated to another prophylaxis. Panelists were then assigned to use Crest®(control sample) for the next three weeks. Gingival evaluations were conducted after two and three week product usage.

## Study Procedures:

The study was conducted in a single blind manner with panelists having no knowledge of the identity of the test dentifrices. All data compiled during the course of the study was subjected to appropriate statistical analysis.

Results of the clinical evaluation are outlined in the Table below.

TABLE II

Modified Gingival Index (MGI)					
Shield Teeth	BASE- LINE	FI- NAL	Ramfjord Teeth	BASE- LINE	FI- NAL
Crest ® Reg.	.686	1.733	Crest ® Reg.	.727	1.225
Example 1	.718	1.482	Example 1	.687	1.090
	14.5%				11%
BLEEDING					
Crest ® Reg.	.177	.949	Crest ® Reg.	.129	.304
Example 1	.193	.655	Example 1	.141	.222
	31%				27%
PLAQUE					
Crest ® Reg.		14.11	Crest ® Reg.		8.59
Example 1		12.52	Example 1		7.94
		11%			7.5%

Based on the results recorded in Table II, it is evident that the dental composition of Example 1 containing bicarbonate/zinc citrate combination significantly reduced bleeding, exhibited a significant improvement in the Modified Gingival Index and had some effect in reducing plaque.

The foregoing description and Examples illustrate selected embodiments of the present invention. In light thereof, various modifications will be suggested to one skilled in the art, all of which are within the spirit and purview of this invention.

## What is claimed is:

1. A method for inhibiting gingival bleeding and improving the texture and consistency of gingival and periodontal tissues which comprises:

- (i) extruding a first toothpaste or gel composition onto a toothbrush, the first composition comprising from about 0.1 to about 10% by weight of zinc salt and from about 0.1 to about 10% by weight of a peroxygen compound in a pharmaceutically acceptable carrier;
- (ii) extruding a second toothpaste or gel composition onto the toothbrush comprising from about 1 to about 80% by weight of a bicarbonate salt in a pharmaceutically acceptable carrier;
- (iii) brushing gingival and periodontal surfaces surrounding the teeth simultaneously with a combination of the first and second toothpaste or gel compositions.

2. A method according to claim 1 wherein the first and second toothpaste or gel compositions are extruded simultaneously onto the toothbrush.

3. A method according to claim 1 wherein the first and second toothpaste or gel compositions are extruded nonsimultaneously onto the toothbrush.

4. A method according to claim 1 wherein the first composition is a gel.

5. A method according to claim 1 wherein the second composition further comprises a fluoride ion source present in an effective amount to inhibit formation of caries on teeth.